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## **A new species of *Tectusa* from the Alpi Orobie, Italy (Coleoptera: Staphylinidae: Aleocharinae)**

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**A b s t r a c t :** *Tectusa orobiana* nov.sp. (N-Italy: Lombardia: Alpi Orobie) is described, illustrated, and distinguished from similar and geographically close congeners. The species is the fifth representative of the genus known from Italy.

**K e y w o r d s :** Coleoptera, Staphylinidae, Aleocharinae, Oxypodini, *Tectusa*, Italy, Alps, Alpi Orobie, new species.

### **Introduction**

The West Palaearctic oxypodine genus *Tectusa* BERNHAUER 1899 is currently represented by 46 described species. Two of them are known from the Iberian Peninsula (ASSING 1996a, 2003), two from central and southern Italy (ASSING 1996b), seven from the Alps (ASSING & SCHÜLKE 1999, SMETANA 2004, ZERCHE 2007), seven from Romania (ZERCHE 2007, 2008), two from Ukraine (SMETANA 2004, ZERCHE 2007), three from Crete (ASSING 2002, in press), two from Turkey (ASSING 2004, 2011), one from the Caucasus (SMETANA 2004), and the remainder from the mainland Balkans, including Kefallinia (ASSING 2006, SMETANA 2004). The diversity of the genus is greatest in the southern Balkans, particularly Greece, but a considerable number of the species have not yet been described.

*Tectusa* species are generally found in alpine and subalpine, more rarely also in montane habitats, usually near snow. Only one species, *T. caligula* (ASSING 1996), was found at low altitudes in southern Italy. The available evidence suggests that all *Tectusa* species are more or less locally endemic, the vast majority to individual mountains or mountain ranges. Only *T. knabli* (BERNHAUER 1914) and *T. tirolensis* (SCHEERPELTZ 1958) are somewhat more widespread, their distributions ranging from the Bavarian Alps in southern Germany to Trentino-Alto Adige in the extreme north of Italy.

In late 2003, Benedikt Feldmann (Münster) forwarded a slightly damaged *Tectusa* female to me, which had been collected in the Alpi Orobie by Andreas Hetzel (Darmstadt) while looking for Carabidae. The specimen evidently represented an undescribed species. However, since the aedeagus provides the clearest and most reliable characters for the identification of *Tectusa* species, a description was not advisable. Instead, Paul Wunderle (Mönchengladbach) and I visited the locality again on 31 May

2004 to try and collect more specimens. Unfortunately, however, the whole glacial cirque where the first specimen had been found was filled with snow and ice, so that our attempts at finding the species were bound to fail. Another opportunity came up in late May 2011, when Benedikt Feldmann, Roswitha Keuker (Münster), Michael Schülke (Berlin), Heinrich Terlutter (Coesfeld), and I spent a few days before the Verona Staphylinidae meeting in Lombardia. On 31 May, all of us visited the locality in the Alpi Orobie, this time in perfect conditions, with most of the snow gone, but some snowfields still present. Hours of sifting in various habitats, however, were seemingly unsuccessful. Then, more than a year later, Benedikt Feldmann sent me photographs of a female *Tectusa*, which he had discovered together with another specimen without abdominal apex among material forwarded to him by Heinrich Terlutter for mounting, material that had been collected by Roswitha Keuker and Heinrich Terlutter in the Alpi Orobie on 31 May the year before, but not identified on the spot. Real relief eventually came when Heinrich Terlutter informed me that he had two additional specimens in his collection, among them a male, so that it was finally possible to describe the species.

## Material and methods

The material treated in this paper is deposited in the following collections:

cAss..... author's private collection  
 cFel ..... private collection Benedikt Feldmann, Münster  
 cTer ..... private collection Heinrich Terlutter, Coesfeld

The morphological studies were conducted using a Stemi SV 11 microscope (Zeiss Germany) and a Jenalab compound microscope (Carl Zeiss Jena). A digital camera (Nikon Coolpix 995) was used for the photographs.

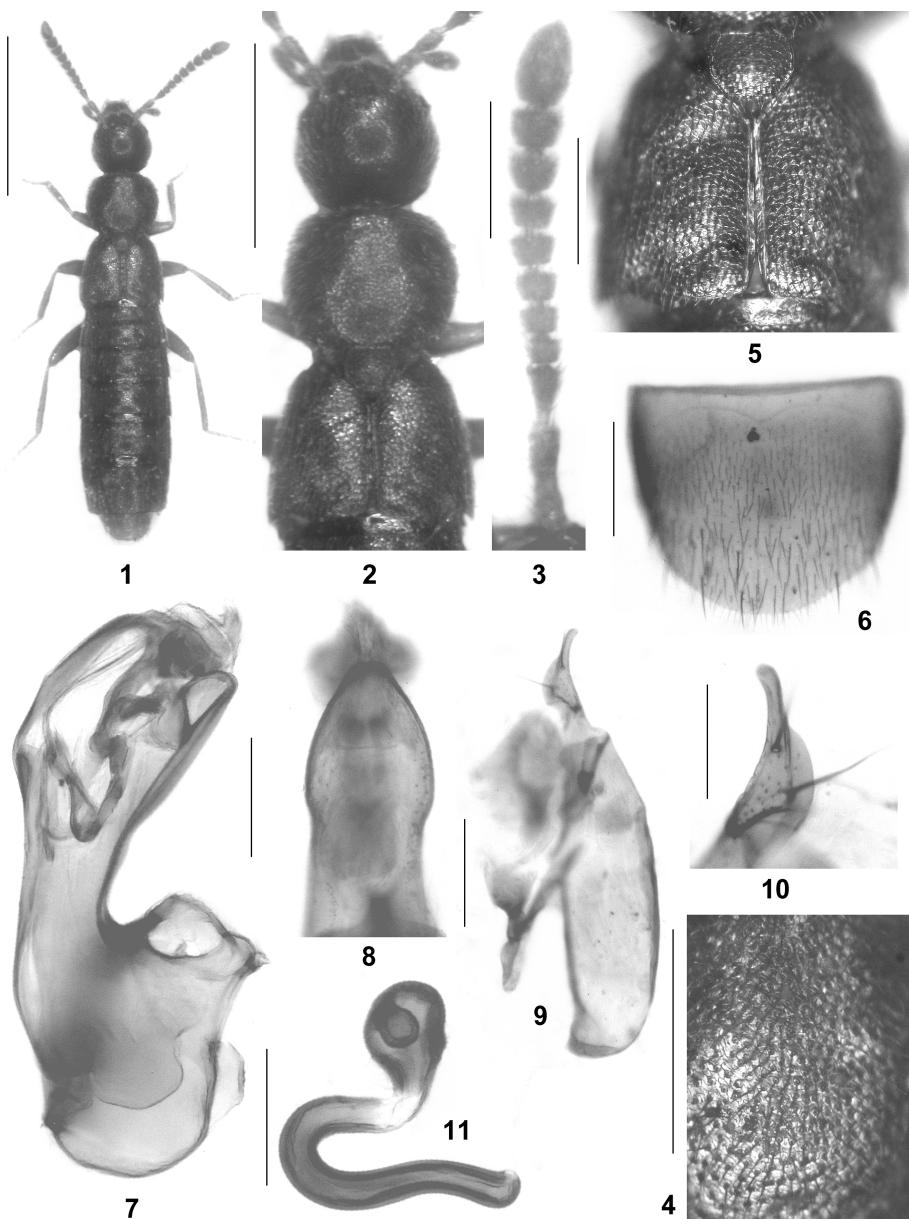
Head length was measured from the anterior margin of the clypeus to the posterior margin of the head, elytral length at the suture from the apex of the scutellum to the posterior margin of the elytra. The parameral side (i.e., the side where the sperm duct enters) of the median lobe of the aedeagus is termed the ventral, the opposite side the dorsal aspect.

### *Tectusa orobiana* nov.sp. (Figs 1-11)

Type material: Holotype ♂: "Italy [3] - Lombardia, Alpi Orobie, SW Pso. San Marco, 2000 m, 46°02'18"N, 09°35'58"E, 31.V.2011, Keuker/Terlutter / Holotypus ♂ *Tectusa orobiana* sp.n. det. V. Assing 2012" (cAss). Paratypes: 2 ♀, 1 ex. [abdominal apex missing]: same data as holotype (cFel, cTer); 1 ♀: "I. Lombardia, Alpi Orobie, 2200 m, Mte. Ponteranica, 10.VI.2003, leg. A. Hetzel" (cAss).

**Etymology**: The specific epithet is an adjective derived from the name of the mountain range (Alpi Orobie) where the species is probably endemic.

**Description**: Body length 2.8-3.2 mm; length of forebody 1.2-1.3 mm. Habitus as in Fig. 1. Coloration: body blackish-brown to blackish; legs reddish-brown to dark-brown with paler tarsi; antennae dark-brown with paler antennomeres I-III.



**Figs 1-11:** *Tectusa orobiana* nov.sp. (1-10: holotype): (1) habitus; (2) forebody; (3) antenna; (4) median portion of pronotum; (5) elytra; (6) male sternite VIII; (7) median lobe of aedeagus in lateral view; (8) apical portion of median lobe in ventral view; (9) paramere; (10) apical lobe of paramere; (11) spermatheca. Scale bars: 1: 1.0 mm; 2: 0.5 mm; 3-6, 9: 0.2 mm; 7-8, 10-11: 0.1 mm.

Head (Fig. 2) approximately as long as broad, widest behind eyes; punctation very fine and rather dense, barely noticeable in the microreticulation. Eyes of moderate size, approximately 0.7 times as long as postocular region in dorsal view. Antenna (Fig. 3) 0.7-0.8 mm long; antennomere IV weakly transverse; V-X of increasing width and moderately transverse; X approximately 1.5 times as broad as long; XI rather short, approximately as long as combined length of IX and X.

Pronotum (Fig. 2) 1.15-1.20 times as broad as long and approximately 1.2 times as broad as head, widest slightly before middle; posterior angles weakly marked; posterior margin truncate; punctation very dense and somewhat less fine than that of head; interstices with distinct microreticulation (Fig. 4).

Elytra (Figs 2, 5) 0.7-0.8 times as long as pronotum; humeral angles almost obsolete; punctation fine and dense, but less dense than that of pronotum; interstices with distinct microreticulation. Hind wings completely reduced. Metatarsomere I slightly longer than the combined length of II and III, but shorter than the combined length of II-IV.

Abdomen approximately as broad as elytra or slightly broader; anterior transverse impressions of tergites III-V shallow; punctation dense, fine, but distinct; interstices with microreticulation everywhere; posterior margin of tergite VII without palisade fringe; posterior margin of tergite VIII convex in both sexes.

♂: posterior margin of sternite VIII convex, not distinctly produced in the middle (Fig. 6); median lobe of aedeagus 0.43 mm long and with rather stout ventral process (Figs 7-8); apical lobe of paramere distinctly dilated in basal half (Figs 9-10).

♀: posterior margin of sternite VIII weakly and broadly convex; spermatheca as in Fig. 11.

**C o m p a r a t i v e n o t e s :** The new species is distinguished from all its congeners by the morphology of the aedeagus. In addition, it is separated from the geographically closest congeners from the Alps (*T. tirolensis*, *T. knabli*, *T. carnica* (LOHSE 1988), *T. holdhausi* (BERNHAUER 1902), *T. montana* (KRAATZ 1856), *T. strupiiana* (SCHEERPELTZ 1958)) and from the Apennines (*T. longicollis* (EPPELSHEIM 1889)) by the distinctly transverse pronotum alone, from most of these species also by the more strongly incrassate antennae with more transverse antennomeres IV-X, and from *T. tirolensis* and *T. knabli*, the geographically closest *Tectusa* species from the Alps additionally by the shorter elytra with almost obsolete humeral angles, as well as by the darker coloration.

**D i s t r i b u t i o n a n d n a t u r a l h i s t o r y :** *Tectusa orobiana* is the fifth representative of the genus recorded from Italy. The type locality is situated in the Alpi Orobie, near the peak of Monte Ponteranica, to the southwest of the Passo San Marco. The specimens were sifted and found under stones in a cold glacial cirque, near snow, at altitudes of 2000 and 2200 m.

### Acknowledgements

My thanks are extended to Andreas Hetzel, who was the first to discover the species, to Benedikt Feldmann, who spotted additional specimens in material meant to be given away to a museum collection, also for proof-reading the manuscript, to Roswitha Keuker and Heinrich Terlutter for eventually succeeding in collecting a male and additional females, and to the latter above all for the generous gift of the holotype.

## Zusammenfassung

*Tectusa orobiana* nov.sp. (Norditalien: Lombardei: Alpi Orobie) wird beschrieben, abgebildet und von anderen, in den Alpen und im Apennin verbreiteten *Tectusa*-Arten unterschieden. Damit sind derzeit fünf *Tectusa*-Arten aus Italien bekannt.

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